

ENVIRONMENTAL PROTECTION AGENCY
REGION II
EDISON, NEW JERSEY 08817

REPLY TO
ATTN OF: 2-SA-ER

DATE: July 23, 1975

SUBJECT: News Article

TO:

Henry Gluckstern
Water Enforcement Branch
Enforcement Division
EPA, Region II
26 Federal Plaza
New York, New York 10007

Attached is an article which appeared in The Record, July 21, 1975.
Thought you would like to see.



Michael V. Polito
Emergency Response & Inspection Branch

Attachment

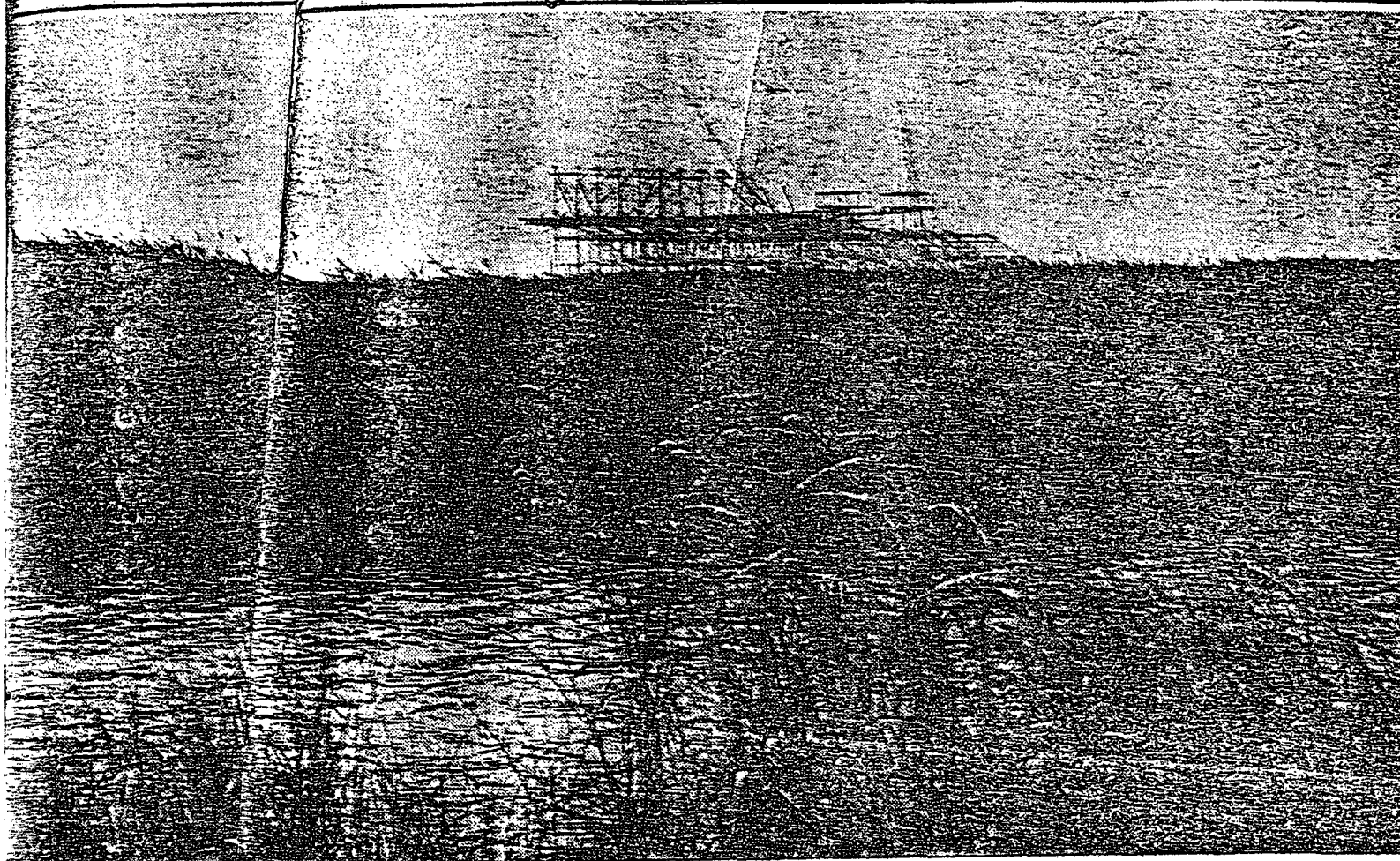


MONDAY, JULY 21, 1973

Henry Guck

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Staff Photo by Peter M.

The marsh flanking Berry's Creek looks ordinary, but the area, near the rising sportsplex, is laced with mercury.

The Berry's Creek quagmire

By JOHN WALCOTT

Staff Writer

Along the eastern shore of Berry's Creek in East Rutherford, between Paterson Plank Road and Route 3, there is a tidal marsh. It covers about 160 acres and it looks like every other salt marsh in the Hackensack Meadows, a bright green sea of towering reeds crisscrossed by a haphazard network of murky creeks and ditches.

But the Berry's Creek marsh is not like all the others. For a number of years now — no one knows exactly how many — it has been soaking up poisonous mercury from the creek like a sponge. The marsh's brackish water now contains 30 times the normal amount of mercury, and the poison has settled three feet or more into the mud on the bottom. Ecologists believe it also has worked its way into the plants and animals that live in the marsh.

No one is sure where the poison came from and no one knows how to get rid of it, but the situation is so bad that the best solution seems to be covering the entire marsh with a nylon liner and starting all over again.

Accidental finding

Of course, pollution is anything but rare in the meadows, which have been little more than an open sewer for decades. Indeed, the plight of the Berry's Creek marsh probably would have gone unnoticed if the New Jersey Sports and Exposition Authority had not made plans to build a football stadium and racetrack next door.

The authority's plans, naturally, became a lightning rod for environmentalists, who wanted to protect the last big chunk of open space in the metropolitan area. The debate came to a head in February 1972, when the state Supreme Court

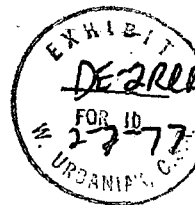
ruled that the authority had not consulted quietly with the state Department of Environmental Protection or the Hackensack Meadows Development Commission. A major environmental hearing resulted, and when it ended after 25 days the DEP and the HMDC ordered the Sports Authority to restore 150 acres of Berry's Creek marsh. The marsh, it was thought, would make an ideal environmental education center.

That much, at least, was true. The Sports Authority and its environmental consultants, McCormick and Associates of Devon, Pa., received an immediate — and disturbing — environmental education.

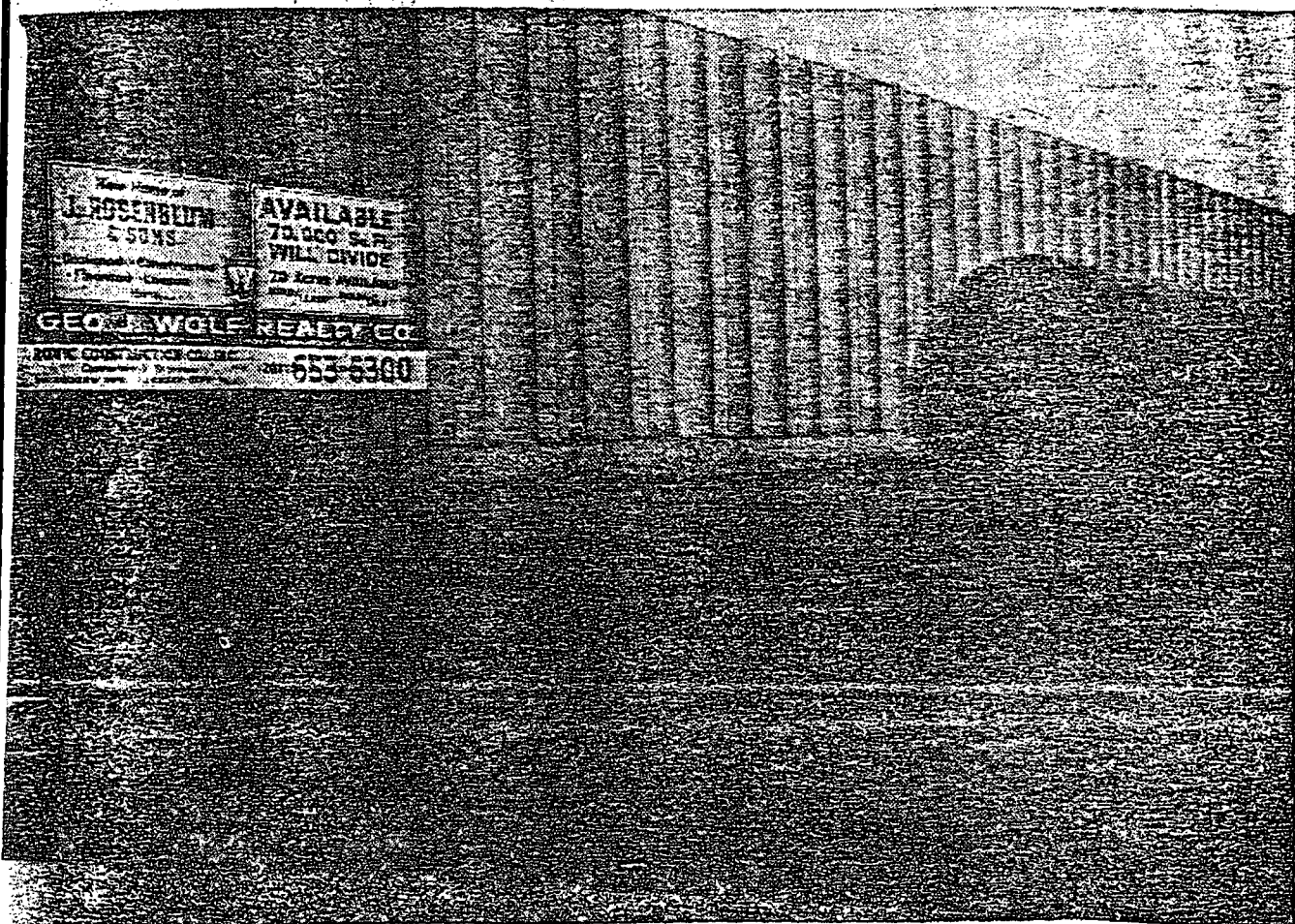
The bad news

Conditions in the marsh, they discovered,

See MESS, Page A-4



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Staff Photo by Peter Monahan

This trim concrete building stands on the site of the old Wood-Ridge Chemical Co. factory, the suspected source of the mercury now tainting the soil of the Berry's Creek marsh. The property borders a Berry's Creek tributary.

The mess at Berry's Creek

From Page A-1

were far worse than anyone had imagined. Poisonous mercury, which they had thought was confined to the top six inches of soil, had sunk down at least three feet and probably much more. Plans to scrape the poisoned soil off the top of the marsh went down the drain.

Also troubling were the unanswered questions. Had the mercury begun to work its way through the food chain, from the water into the plants and then into the muskrats and other higher mammals? Was the mercury seeping out of the sponge-like marsh into the rest of the Hackensack River system? And above all, where had the mercury come from? No one knew.

Today, three years after the Sports Authority first learned of the marsh's condition, the questions remain unanswered. Jack McCormick and Associates is drawing up an outline for an 18-month study of the marsh and has trapped several muskrats for study. The muskrats' tissue will be analyzed for traces of mercury.

"Mercury tends to collect in the roots of plants," says McCormick. "During the winter, the muskrats dig into the roots for food. I think it's a very good bet that we'll find mercury in the muskrats."

Mercury is one of the most stubborn and insidious poisons known to man. It accumulates slowly in the body, building up over weeks and months and combining mostly with blood, nerve, and liver cells. When enough traces of mercury have built up, the symptoms of mercury poisoning begin to appear. Sometimes it may be

a loss of the sense of touch in hands or feet. Sometimes it is deafness or blindness. Sometimes it is emotional instability, which has given mercury poisoning its nickname, the Mad Hatter's disease — the metal once was used in the manufacture of hats.

Mercury also is able to pass from the womb of a mother to a fetus she carries. When this happens, the fetus may be born mentally retarded or with cerebral palsy, a form of brain damage that disrupts the normal motion of muscles. In Japan, 46 people died after eating shellfish taken from Minamata Bay, which had been polluted with mercury from a plastics factory.

Effects unknown

No one knows what effect mercury may have on muskrats or other mammals other than man. The best guess is that it is as dangerous to them as it is to us.

Fortunately, there is no evidence that anyone has been poisoned by shellfish or other meat taken from the marsh. Ironically, the chronic pollution of Berry's Creek may have prevented such a tragedy, simply because no one would think of eating anything that had been fished out of Berry's Creek.

These days, though, the water in Berry's Creek is getting cleaner. Most of the industrial discharges have been stopped, and there is more oxygen in the creek than there has been in many years. But because of the stubborn mercury, Berry's Creek may never be safe again.

Mercury is an element, one of the basic building blocks of the planet Earth. It cannot be broken down into anything

else, and it cannot easily be converted into anything less toxic. Once it gets into a marsh, as it has in Berry's Creek, it is almost impossible to get it out.

Nevertheless, the Sports Authority has been ordered to restore the marsh for use as an environmental education center. Last year, the authority's environmental consultants called a meeting of marsh experts to discuss alternatives for cleaning up the mess.

'I don't know'

"The outcome of the meeting," says head consultant Jack McCormick, "was, 'My God, I don't know what to do about it.'"

McCormick and his men drew up a list of 12 alternatives, ranging from doing nothing to actually covering the entire mess with a giant sheet of plastic, nylon, or rubber and starting over again. One of the alternatives was paving over the marsh, which might be described as destroying the marsh in order to save it.

Other alternatives suggested included dredging and refilling the marsh (estimated cost: up to \$2.3 million), stripping the vegetation and covering the 130 acres with sand and gravel (cost: up to \$3.4 million), and using chemicals to immobilize or collect the mercury. All of the methods shared an important drawback: none of them has been tested outside a laboratory.

It may be two years before the Sports Authority is forced to make a choice, but the most plausible alternative at this point seems to be the plastic, nylon, or rubber liner. Football players have been playing on artificial turf for

some years now, but the New Jersey stadium may be the first to feature an Astro-marsh.

It would work like this: A dike would be built and the marsh would be drained and stripped of vegetation. A 130-acre liner — costing about \$120,000 for nylon, for example — would be spread over the marsh, and a freshwater marsh would be started on top of the liner, perhaps using runoff from the sports complex's 20,000-car parking lot. Drawbacks: No one is sure the scheme will work, or how long the liner would last.

Meanwhile, pollution experts from the state Department of Environmental Protection, the U.S. Environmental Protection Agency, and the meadowlands commission still are trying to figure out where all that mercury came from.

A fat clue presented itself last summer. On June 7, a water, oil, and mercury spill was reported at the site of the old Wood-Ridge Chemical Co. on the West Riser Ditch, a tributary of Berry's Creek, about two miles upstream from the marsh. The plant, which had been sold to the Ventron Corp. of Beverly, Mass., and then to the George J. Wolf Realty Co. of Jersey City, was being demolished. In order to comply with occupational safety and health regulations, the demolition workers were watering down the property while they razed the building. The water running off the site carried oil and mercury into the ditch.

Who knows how long?

During the 40 years it had operated, the plant had used a substantial amount of mercury in its operations and eventually had installed a pollution control system to eliminate the discharge of poison into the Riser Ditch. For many years no one knew, or even asked, what the plant — or others like it — was pouring into the meadows. Now it was too late.

Today the old chemical plant is gone, replaced by an antiseptic-looking white concrete building marked by a large sign advertising the space inside for rent. Downstream, invisible, the mercury remains.

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